

The current policy, which limits conditional licensing to four channels pairs, is not supported by any record that shows the Federal Government needs access to large portions of the band. Only NTIA knows for certain, but the Commission should not be limiting conditional licensing so drastically in the absence of a showing of need by the Federal Government.⁵⁷

In its comments, Winstar identifies other reasons for prioritizing an agreement with NTIA:

[c]onditional licensing allows the microwave industry to operate more efficiently, as it provides licensees "greater flexibility in coordinating and consolidating construction projects." Moreover, the additional step of seeking an STA is eliminated.⁵⁸

Comsearch, an FS frequency coordinator, and the NSMA, which represents frequency coordinators nationwide, both fully support authorizing this licensing tool for enhancing spectrum management and accelerating service commencement.⁵⁹ Telenetics/SMI characterize conditional licensing as a safe licensing procedure because the requisite successful completion of the private sector "coordination process is generally effective in ensuring protection of other users from interference," and there is every reason to conclude that the same success would be achieved with the proposed NTIA-private sector coordination.⁶⁰

⁵⁷Giganet at 3.

⁵⁸Winstar at 8-9 (citing Part 101 Order, 11 FCC Rcd at 13462). See also Consolidated at 1; Alcatel at 19-23; FWCC at 15-17; NSMA at 12-15.

⁵⁹Comsearch at 3 ("fully supports the concept of including NTIA in the coordination process, and stands ready to cooperate with the Commission and NTIA/IRAC to implement the necessary procedures"); NSMA at 12-15.

⁶⁰Telenetics/SMI at 7.

This support cannot be ignored. It compels decisive Commission action in obtaining NTIA's cooperation. Under these circumstances, Alcatel emphasized in its comments:

Failing to aggressively pursue negotiations with the NTIA for 23 GHz Band conditional licensing is unacceptable. The Commission must be held accountable for its lack of progress. Avoidance of this viable option to help FS users provide essential backbone support for broadband technologies and for public safety or utility services no longer can be tolerated, especially since support for this proposal in response to the Petition was nearly unanimous.

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At a minimum, the Commission promptly must report publicly on the status of its negotiations, or lack thereof, with NTIA. A fast-track timetable must be established for the Commission to approach NTIA and commence serious discussions on this issue. Further, the Commission must provide representatives from the FS industry, from NSMA and other frequency coordinators, and from all remaining affected constituencies the opportunity to participate in these negotiations.⁶¹

⁶¹Alcatel at 22-23. See also NSMA at 14-15; FWCC at 16-17. Conditional licensing in the 23 GHz Band is permitted but only on an unjustifiably limited basis. In the NPRM, the Commission reiterated its determination that such licensing should be permissible only on the four (4) low power frequencies listed in Section 101.147(s) and only if the FS user would not operate with an ERP (the Commission appropriately proposes correcting its rules so that the maximum power standard is stated as EIRP, not ERP) greater than 55 dBm pursuant to Section 101.147(s). NPRM, 15 FCC Rcd at 3152-53. Several parties disagree with the Commission's interpretation. First, it is inconsistent with the specific text of Section 101.31(b). Second, imposing this arbitrary limit on the use of conditional licensing, so that it is available only to 23 GHz Band low-power channels, unnecessarily restricts access by FS users. Comsearch at 1-3; NSMA at 15-18; Alcatel at 23-26; FWCC at 17-20. Even if the Commission continues to ignore FS user needs and procrastinate in completing negotiations with NTIA for blanket 23 GHz Band conditional licensing, at a minimum, it must reverse position now and allow it on all frequencies in that band if the ERP (or EIRP) does not exceed 55 dBm. This decision clearly would serve the public interest because it supports critical applications by many industry users and expedites access to the band without any risk of harmful interference to government users because of the low ERP being used.

LMDS TECHNICAL RULES MUST BE REVISED

In the NPRM, the Commission suggests revisions to various Part 101 LMDS technical rules.⁶² These proposals include permitting manufacturers to self-verify LMDS radios instead of obtaining Commission certification, modifying out-of-band emission measurement standards, and relaxing other operating requirements.⁶³

A. LMDS Transmitters Must Be Subject To Verification

The Commission proposes applying the same verification procedures to LMDS transmitters as it does to all other Part 101 radios.⁶⁴ The record requires adoption of this proposal.

Winstar states that "[t]here is no compelling reason to continue to require that these transmitters be subject to the certification process" and that self-verification "would permit licensees ... to more rapidly deploy their services."⁶⁵ Giganet concurs:

The equipment developed for these services is similar or identical to equipment that is employed in other frequency bands that are subject to Verification. Moreover, point-to-multipoint equipment is employed only by licensees with area-wide licenses, and such licenses have the economic incentive both to make the best use of their licensed spectrum and to operate in compliance with FCC technical rules. Thus, licensees' procurement requirements and acceptance tests are likely to assure that the equipment is working according to Commission rules.⁶⁶

⁶²NPRM, 15 FCC Rcd at 3156-58.

⁶³Id. at 3157-58.

⁶⁴NPRM, 15 FCC Rcd at 3157-58.

⁶⁵Winstar at 7. See also Triton at 2-3; Alcatel at 29; NSMA at 19; FWCC at 21.

⁶⁶Giganet at 5.

B. Relaxed LMDS Operating Standards Should Be Adopted

Revisions are also proposed that are intended to facilitate deployment and operation of LMDS systems.⁶⁷ In general, these proposals are acceptable. However, the Commission should ensure that implementation of these relaxed standards does not increase the incidence of harmful interference. It should discourage licensees from automatically defaulting to the new standard, because they are the least stringent possible.

In its comments, Alcatel recommended that the 1 MHz bandwidth used to measure out-of-band emissions for digital radios under Section 101.111(a)(2)(ii) is not required to include any of the authorized bandwidth being tested.⁶⁸ Support for this recommendation exists because it would promote increased FS frequency availability by optimizing spectrum efficiency, facilitating product development and preserving adequate safeguards against harmful interference to protected operations.⁶⁹ The Commission therefore should incorporate this change into Section 101.111.

FS SPECTRUM SHOULD NOT BE AUCTIONED

In the NPRM, the Commission seeks comment on how it might modify Part 101 general licensing to ensure that it satisfies the Balanced Budget Act of 1997 ("BBA")⁷⁰

⁶⁷NPRM, 15 FCC Rcd at 3156-58.

⁶⁸Alcatel at 26-28.

⁶⁹NSMA at 18-19; FWCC at 20-21.

⁷⁰Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251.

requirement to auction all mutually exclusive ("MX") partial license applications.⁷¹ The record clearly condemns using auctions for FS links.

This opposition exists for several reasons. Auctions are not authorized for FS site-by-site licensing under the BBA, they are impractical for such systems and they would significantly harm operations without improving a viable licensing process.⁷²

A. FS Auctions Are Not Authorized Under the BBA

Axiomatic to the BBA is the requirement that auctions only are available after "engineering solutions, negotiation, threshold qualifications, service regulations, and other means [are used] in order to avoid mutual exclusivity in application and licensing proceedings."⁷³ As UTC and numerous other commenters document, subjecting FS site-by-site systems to auctions would not meet this statutory requirement:

The Commission proposal to license microwave services through competitive bidding operates from the false-premise that the Commission has the authority to do so. Section 309(j) only authorizes competitive bidding for mutually exclusive applications for initial licenses or construction permits. As the Commission acknowledges in the *Notice of Proposed Rule Making* "under the current licensing scheme, mutually

⁷¹NPRM, 15 FCC Rcd at 3166-68. Specifically, the Commission proffers four (4) options for addressing the auction requirement with respect to the FS: Option I - license Part 101 microwave spectrum based upon an appropriate channelization plan and geographic service area through use of auctions to choose among MX applications (similar to approach in 38 GHz Band); Option II - relocate licensees so that spectrum is clear for licensing by auction, provided that a "home" for the displaced licensees could be located (similar to 2 GHz band PCS); Option III - identify certain bands where incumbents could retain co-primary status and other bands where incumbents would have secondary status (similar to 31 GHz band LMDS licensing); and Option IV - retain current approach, utilizing various channelization plans and site-by-site licensing, but using auctions to resolve MX applications. Id.

⁷²Alcatel also supports preserving the BBA exemption from auctions for public safety entities. Accord APCO at 9-11; CPRA at 3-4; LAC at 3-5; Long Beach at 5; Riverside at 3-5.

⁷³47 U.S.C. § 309(j)(6)(E) (2000).

exclusive situations rarely if ever occur. This is so because microwave services are currently licensed on a site-by-site basis and because applicants must obtain frequency coordination of proposed facilities prior to filing an application with the Commission. Hence, the current licensing scheme would not trigger the Commission's authority to auction spectrum for microwave services.

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Nonetheless, the Commission assumes that it may auction microwave spectrum over large geographic areas. Implicit in this assumption is that geographic service area licensing of microwave services will create mutual exclusivity, where none existed before. In this regard, the Commission oversteps its authority again.... As the Commission acknowledges in the *Notice of Proposed Rule Making*, "[m]icrowave is used as the *backbone* infrastructure" for private as well as commercial licensees, and is not designed to communicate in broad geographic service areas. Instead, microwave communicates in narrow point-to-point and point-to-multipoint paths. Hence, the proposal to license microwave services according to geographic areas is contrary to the nature in which the service is used, resurrecting the concern raised by Congress, "that the Commission might interpret its expanded competitive bidding authority in a manner that minimizes its obligations" to avoid mutual exclusivity.⁷⁴

Comsearch warns that "[b]y changing from a site-by-site licensing scheme to a geographic licensing scheme for microwave spectrum, the Commission would be introducing the very mutual exclusivity that it is charged with avoiding under the law, and would be throwing away a system of 'engineering solutions' that the Commission admits is working."⁷⁵ For the same reasons, APCO strongly opposes auctioning FS licenses:

⁷⁴UTC at 3-4 (footnotes and citations omitted). See also API at 16 (footnote omitted) ("site-by-site licensing scheme in the POFS point-to-point bands serves the public interest and should be continued"); Radscan at 2; NSMA at 20-21; FWCC at 21-24; Alcatel at 30-31.

⁷⁵Comsearch at 9.

[g]eographic licensing is not the most appropriate or efficient licensing scheme for fixed point-to-point services. Public safety and other private operational fixed microwave users are not seeking to blanket a wide-area and/or market. Instead, they are trying to link specific service points (*e.g.*, radio system transmitter sites, command and control facilities) in an effort to conduct their public safety or other critical infrastructure obligations. Perhaps geographic licensing is appropriate for point-to-*multipoint* types services, but it has no purpose in licensing of point-to-point services, other than as a facade to "manufacture" mutual exclusivity.

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Finally, geographic licensing would create a great level of uncertainty for equipment vendors in these bands because the band plans and technical parameters for the use of the spectrum could change at the whim of the new licensee. The design and development of equipment requires stable standards to be in place. Any changes would require additional time to develop new standards in order to protect the incumbent systems from harmful interference. This could ultimately harm public safety users because it could reduce equipment availability and increase the cost of equipment.⁷⁶

Stratos cites the same concerns:

With site-by-site microwave licensing that incorporates prior frequency coordination, mutually exclusive applications are not sufficiently prevalent so as to justify auctions.... If mutually exclusive situations "rarely, if ever, occur," auctions, and a corresponding revision to the microwave rules, do not make sense and would be contrary to the statute. A radical restructuring of the microwave licensing rules for all bands above 2 GHz is not warranted without a demonstration that the bands above 2 GHz face mutual exclusivity for initial microwave licenses. In the absence of such a demonstration, the Commission should not institute auctions in the bands above 2 GHz.⁷⁷

⁷⁶APCO at 6-7.

⁷⁷Stratos at 5-6.

B. Auctions Unnecessarily Would Harm Site-by-Site FS Licensing

The record unambiguously reflects that the current licensing process for site-by-site FS systems works quite well and does not require "fixing." Indeed, introducing auctions would likely destroy an increasingly effective, timely, and user-friendly process.

NSMA, which represents FS frequency coordinators nationwide, accurately characterized how the existing licensing process is successful:

The existing frequency coordination process works and assures virtually no MX applications will be filed. Carriers depend upon microwave facilities because, under this licensing procedure, such facilities can be constructed and made operational rapidly. Auctions would ruin a licensing procedure that does not need to be changed and that would result in significant delay.⁷⁸

Stratos agrees:

The proposals have the potential of disrupting the vital communications used by major industries throughout the U.S., including the oil and gas industry, transportation industry, electric utility industry and others that rely upon microwave services to provide "mission critical" communications.

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Stratos Offshore believes that the current licensing process is working and the Commission should refrain from doing anything that could jeopardize this success. To the extent that the Commission believes that a change is necessary, Stratos Offshore believes that the only viable option is for the Commission to retain site-by-site licensing for microwave applications and conduct auctions only when there is mutual exclusivity. This approach is consistent with the Balanced Budget Act, will not

⁷⁸NSMA at 20. See also FWCC at 23; Alcatel at 30-31.

disrupt vital incumbent uses of the microwave spectrum, and ensures that incumbent licensees have the ability to expand their systems.⁷⁹

C. Any Proposed FS Relocation To Increase Spectrum Available For Auctions Is Unacceptable

Under the proposed Option II, the Commission would, once again, relocate FS users, to clear available operations for auctions.⁸⁰ A serious flaw exists with this proposal. Inadequate replacement spectrum for FS users exists.

This shortage is acknowledged by the Commission in the NPRM, as it describes potential replacement bands as being "significantly encumbered, particularly in urban areas" and it further notes that the "relocation of 2 GHz microwave licensees into the 6 GHz and 11 GHz bands has further burdened this spectrum."⁸¹

The record amplifies the Commission's skepticism. API wonders whether a "suitable 'spectrum home' could be found should another sizeable Fixed Service band be rededicated for new services and/or placed on the auction block."⁸² APCO warns that, "[a]side from imposing potential cost on taxpayers, relocation of incumbents would be contrary to the public interest as there is a lack of sufficient alternative spectrum."⁸³

⁷⁹Stratos at 2.

⁸⁰NPRM, 15 FCC Rcd at 3167.

⁸¹Id., 15 FCC Rcd at 3166.

⁸²API at 17. See also FWCC at 23-24.

⁸³APCO at 7.

Anecdotal evidence is set forth that such fears are justified. The County of Los Angeles recounts its efforts at relocating from the 2 GHz band:

The County recently went through the relocation process in the 2 GHz band, and found it very difficult to find replacement frequencies in the spectrum-congested Los Angeles area. The County was also constrained in its frequency selection, as higher frequency microwave bands require much shorter path lengths, and the addition of "repeater" sites. Many of the County's microwave paths link remote mountaintop sites, for which there may be *no* intermediate location on which to place a new microwave repeaters. Furthermore, zoning problems in urbanized areas have made new site development extraordinarily difficult, if not impossible. Therefore, relocating incumbents is simply not an option in many cases, and must not be relied upon by the Commission in its ill-advised efforts to auction microwave spectrum.⁸⁴

Stratos, in its comments, details comparable problems and thus strongly opposes adoption of Option II:

Significantly, incumbent microwave licensees operating the 2 GHz band have not completed the process of relocating to other bands in order to accommodate PCS. To initiate further relocation would only be a further disruption to these microwave licensees.

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Identifying spectrum for relocation will be particularly difficult for companies like Stratos Offshore. If Stratos Offshore is required to operate its network at spectrum above 6 GHz, the reliability of the network will be compromised. Indeed, at spectrum above 6 GHz, the effects of rain fade are pronounced, and the distance that the radio frequency signal can travel is necessarily shortened. Without significantly increasing power or constructing additional links for its networks, both of which adds significant cost to Stratos Offshore's operations, the reliability of Stratos Offshore's network will be affected. With the bands *below* 6 GHz crowded, it is not clear where the Commission can locate a company like Stratos Offshore without affecting

⁸⁴LAC at 4.

the reliability of its network and/or significantly increasing the cost of its operations.

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Relocation will waste the costly existing infrastructure already in place. In many cases, currently operating equipment will not be able to be adapted to operate at a different frequency, and therefore will be rendered obsolete. Even where equipment can be adapted to new spectrum, it will be very costly to make changes to the equipment.... For a company like Stratos Offshore, the cost of relocation will be significant since it controls hundreds of microwave licenses....⁸⁵

**ADOPTION OF PROPOSED RULES FOR
10 GHz BAND OPERATIONS AND PART 74
DIGITAL TRANSMISSIONS ALSO WOULD
SERVE THE PUBLIC INTEREST**

Several parties, in their comments, recommend revising the maximum allowable EIRP for the 10 GHz Band to avoid problems with longer paths and instituting a rulemaking to revise Part 74 so that broadcast support operations can utilize digital technologies more readily.⁸⁶ In the NPRM, however, neither proposal is included. For the reasons set forth below, the Commission should ensure that these proposals are adopted.

⁸⁵Stratos at 10-11.

⁸⁶NSMA at 21; FWCC at 26; Alcatel at 31.

A. The EIRP for the 10.60-10.68 GHz Band Should Be Modified

The Commission's proposal, to reduce the Maximum Allowable EIRP for the 10.6-10.68 GHz band from +55 dBW to +40 dBW,⁸⁷ is inappropriate. It would reduce the EIRP limit for the entire 10.55-10.68 GHz band to +40 dB.⁸⁸

This lower EIRP limit would restrict the maximum antenna size and make the band difficult to use for long paths relocated from the 2 GHz band. Thus, more power would be required in the 10 GHz Band to compensate since the band is affected by rain outage.

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The +40 dBW maximum EIRP would limit the maximum antenna size to a 6 foot diameter in this example. If the Commission wants to limit the EIRP, it should change the maximum EIRP for the 10 GHz Band in Section 101.113(a) from 55 dBW to 45 dBW. This change would allow up to a 10 foot diameter dish at each station. Antenna sizes of 10 foot will provide adequate system gain for most FS applications in the 10 GHz band.⁸⁹

As an alternative, Alcatel and others propose that the following footnote should be added to the EIRP limit for the 10.55-10.68 GHz band in Section 101.113(a):

Transmitters licensed after [effective date] shall not exceed an EIRP limit of 40 dBW. ATPC power reduction may be used to meet the 40 dBW EIRP limit for transmitters with an EIRP between 40 dBW and 55 dBW.

This alternative rule change should be adopted because it "would maintain the current 55 dBW EIRP limit, but would require systems to reduce their power to the 40 dBW

⁸⁷NPRM, 15 FCC Rcd at 3153.

⁸⁸See NSMA at 21.

⁸⁹Alcatel at 32-33.

level using Automatic Transmit Power Control.... Transmitters only would exceed the 40 dBW level during short periods of multipath or rain fading."⁹⁰

B. The Commission Promptly Should Initiate A Rulemaking to Revise Part 74

Specific changes in the Television Broadcast Auxiliary Service must be made to ensure that digital transmission technologies can be utilized fully because the Part 74 rules only permit analog modulation.⁹¹ SBE, Alcatel and many others support this proposal.⁹²

It is critical that technical standards be prescribed to ensure the reliability of all digital paths. Specific technical rules in this service, such as digital modulation, maximum EIRP for short paths, and ATPC, will support and promote HDTV over microwave paths.

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Broadcasters, therefore, are unable to install new digital radios to carry HDTV. If broadcasters cannot get digital television signals from the studio to the transmitter, they cannot provide digital television service.

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This problem is not speculative. Certain broadcasters at the forefront of providing HDTV have been frustrated because the Commission will not grant applications for digital STL links. Anything but prompt action on this proposal threatens a successful HDTV roll-out.⁹³

⁹⁰Alcatel at 33; NSMA at 22; FWCC at 28.

⁹¹Alcatel at 33-34; NSMA at 23-24; FWCC at 28-29.

⁹²SBE at 5-6; Alcatel at 33-34; NSMA at 23-24; FWCC at 28-29.

⁹³Alcatel at 34.

CONCLUSION

A compelling need exists for expanding access to FS spectrum. The proposals in the NPRM to increase 23 GHz Band and 10 GHz Band access, if adopted, would accomplish this goal.

The record of this proceeding sends a clear message to the Commission -- the proposals to re-channelize the 23 GHz Band, update its technical and operating standards, promote 23 GHz Band low power operations and blanket conditional licensing, and relax antenna and LMDS standards -- all are in the public interest and must be incorporated into the rules. Equally as clear is the resounding veto to the proposed use of auctions for FS site-by-site licensing.

Given this strong consensus, the Commission has no choice but to take these actions. To do otherwise would ignore the record of this rulemaking, would be arbitrary and capricious, and would disserve the public interest. Thus, Alcatel requests that the Commission expeditiously adopt these new rules.

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Attachment A

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California Public-Safety Radio Association ("CPRA")
City of Long Beach ("Long Beach")
Comsearch
Consolidated Spectrum Services ("Consolidated")
County of Los Angeles ("LAC")
County of Riverside ("Riverside")
DIRECTV, Inc.
EchoStar Stellite Corporation
Fixed Wireless Communications Coalition ("FWCC")
Giganet Wireless Systems, Inc. ("Giganet")
Motorola, Inc. ("Motorola")
National Spectrum Managers Association ("NSMA")
Nextel Communications, Inc. ("Nextel")
Radscan, Inc. ("Radscan")
Satellite Broadcasting and Communications Association
Satellite Industry Association
Society of Broadcast Engineers, Inc. ("SBE")
Stratos Offshore Services Company ("Stratos")
Telenetics Corporation/Southwest Microwave, Inc. ("Telenetics/SMI")
Triton Network Systems, Inc. ("Triton")
United Telecom Council ("UTC")
Winstar Communications, Inc. ("Winstar")

CERTIFICATE OF SERVICE

I, Karen Adams, a secretary in the law firm of Gardere & Wynne, LLP, hereby certify that, on the 4th day of August, 2000, a true and correct copy of the foregoing Reply Comments will be sent via first class mail, postage prepaid, to the following:

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